

How the Plant Works

Each unit has a nuclear reactor, a large steel vessel at the center of a massive concrete and steel containment building. Uranium fuel atoms in fuel rods sealed in the reactor split, or fission, and spontaneously release heat. Pumps continuously circulate water under 2,250 pounds per square inch of pressure around the fissioning fuel. The high pressure prevents boiling, so this water, heated to 611° F, carries heat away from the reactor to steam generators. Here, the hot water from the reactor, confined in 11,000 long U-shaped tubes, releases its heat to water at a much lower pressure surrounding the tubes. This water, called secondary coolant, boils into steam and drives each plant's four turbines. The turbines extract all useful energy from the steam, which enters a condenser, cools back into water, and returns to the steam generators, to continue the power cycle. The turbines transmit the energy, or work, taken from the steam, to a long shaft that turns a large generator, which produces alternating current for distribution to customers.

